DOCUMENT RESUME

ED 242 864 CE 038 431

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TITLE Professional Education and Technical Education Needs of Health Occupations Education Teachers.
PUB DATE Dec 83
NOTE 23p.; Paper presented at the American Vocational Association Convention (Anaheim, CA, December 2-6, 1983). Small print in appendices may not reproduce well.
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Allied Health Occupations Education; *Educational Needs; Needs Assessment; *Professional Education; Questionnaires; Secondary Education; Self Evaluation (Individuals); State Surveys; Teacher Attitudes; *Teacher Education; Teacher Education Curriculum; Teacher Qualifications; Teaching Skills; *Technical Education; *Vocational Education Teachers
IDENTIFIERS *North Carolina

ABSTRACT

A study examined the professional and technical education needs of health occupations education (HOE) teachers in North Carolina. Utilizing an ex post facto research design, researchers administered professional education needs assessment surveys to all 1,058 teachers in attendance at the 1981 North Carolina Annual Vocational Conference. A separate technical educational needs survey was administered to the HOE teachers in attendance. A comparison of the responses of the eight types of vocational education teachers completing the survey indicated that HOE teachers appear to have the same professional education needs as do all of the other vocational educators, with the exception of the home economics teachers. The top professional education needs identified by the respondents were in the areas of public relations, the design and implementation of community surveys, self-evaluation of instructional effectiveness, budgeting, and long-range plan preparation. Based on the technical education needs survey, it was concluded that staff development activities for the HOE teachers should focus on the state of the art of the national health care system, the use of student and career information in career guidance services, problem solving and decision making, health law, and metric system computations. (MN)

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PROFESSIONAL EDUCATION AND TECHNICAL EDUCATION NEEDS OF HEALTH OCCUPATIONS EDUCATION TEACHERS

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by

RACHEL H. STEVENS

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Vocational educators need to possess expertise in their chosen occupational areas and have professional preparation in education. Backgrounds of vocational education teachers represent education and training which often differ from those of non-vocational education teachers. These teachers may be products of college and universities, high school vocational education programs, technical or trade schools, apprenticeships and/or on-the-job training programs. Health occupations education teachers are typical of individuals with these varied types of preparation in that they may have been trained at the certificate level or possess a baccalaureate degree in a health specialty, but are often lacking in teacher preparation.

In North Carolina, health occupations education teachers are not required to hold a baccalaureate degree before becoming certified to teach, many need basic teacher education preparation. Although all these teachers are registered nurses prior to becoming HOE teachers, they may need additional technical knowledge or skills which are required by their public school positions. Health occupations education programs in the secondary schools of North Carolina began during the 1963-64 school year with three pilot projects.

There is little available data on the professional education and technical education needs of high school HOE teachers. Additional research is needed to further examine and expand the existing data. For this reason, this study was undertaken. The purpose of this research was to study the self-assessed staff development needs of a group of HOE teachers in North Carolina. The questions to be answered were:

(1) Do professional education needs of HOE teachers differ from other vocational education teachers?
(2) Is there a relationship between age and technical needs expressed by HOE teachers?
(3) Is there a relationship between the type of educational preparation and the type of technical needs expressed by HOE teachers?
(4) Is there a relationship between the type of employment held prior to becoming a HOE teacher and the type of technical needs expressed by these teachers?

A review of the literature revealed a dirth of studies relating to the HOE teacher's inservice and advanced education needs. There were many studies in the educational inservice of teachers in other educational areas.

Allied health literature was also reviewed for studies on the general allied health fields and teacher needs. Since teachers in the HOE programs under study were all nurses before becoming public school teachers, selected studies were included from the nursing discipline. Studies reviewed supported the need for diagnosing teacher self-assessed needs as part of planning staff development and further educational programs. Age was a factor in identifying topic as in continuing education. Other demographic data was not as significant.

Knowles (1975) indicated that diagnosing needs should be the first step in educational program planning.(1) Further supporting the need for

diagnosing teacher education activities based on identified needs of the particular teachers under consideration.

Broski and Upp (1979) reported the top seven topics desired by allied health faculties to meet their educational needs.(2) Two of these seven needs were also found to be in the top ten needs identified by this research. Those needs were for further education in management skills and in health care systems information.

Curran (1977), in a study of registered nurses and their needs, found that age was a factor in identifying topics and courses to meet educational needs.(3) However, Smith, Ross and Smith (1977) found that demographic data was not of significance in the perceived needs for continuing education of registered nurses.(4) The research being reported here supported the findings that demographic data were not significant in the self-assessed needs of the sample of HOE teachers who were also registered nurses.

Research Design

This study was conducted utilizing the ex post facto research design. Katz (1953) and Kerlinger (1973) indicated this design allows the examination of independent variables retrospectively, either in field studies or descriptive correlational studies. Advantages of ex post facto studies include: (1) the strength of realism, (2) the ability to look at selected variables, (3) the results can be generalized to other settings since artificial settings are not used, and (4) the efficiency and effectiveness of the design. The ex post facto research design allows the researcher looking at selected variables to discover interrelationships in a relatively short time.

Developing the Study Instruments

The staff development instrument, Professional Needs Assessment for Vocational Teachers, instrument was used by all vocational education program areas to assess staff development needs. This instrument was developed and validated by the Minnesota Research and Development Center for Vocational Education. Respondents were asked to indicate their own professional education needs in areas represented by competency statements. Answers ranged from one to seven as follows: "one" represented no improvement needed and "seven" represented very high need. Performance competency statements covered the topics of program planning, development and evaluation, instructional evaluation, and instructional planning. Also included were the topics of guidance, school-community relations, vocational student organizations, instructional techniques, and professional role development. Program areas that used this instrument were agricultural education, home economics education, trade and industrial education, marketing and distributive education, industrial arts education, business and office education, prevocational education and health occupations education.(5)

The technical needs survey instrument was developed by the Health Occupations Education Unit of the Division of Vocational Education, North Carolina Department of Public Instruction. Items were selected for the questionnaire after they had been validated by a sample of experienced

health occupations teachers.(6) The sample for this study consisted of vocational education teachers attending the 1981 North Carolina Annual Vocational Conference. HOE teachers were the focus of this research, but responses from all other vocational education teachers attending the conference were used to make comparisons. A professional education needs survey was administered to all 1,058 teachers in attendance and a technical education needs survey was administered to the HOE teachers in attendance.

To answer the research questions, four null hypotheses were formulated for statistical testing. Friedman statistic was used to test the first null hypothesis at the alpha level of .05. Spearman's Correlation Coefficient was used to compare the arrangement of the 110 professional education ranks of the teachers from the eight vocational areas. The probability of a possible relationship between the arrangement of the 97 technical ranks and the selected demographic data was tested at $\alpha = .05$, using the Wilcoxon Signed Rank Test.

In summary, this study analyzed the self-assessed education needs of HOE teachers by comparing their professional education needs to all other vocational teachers and technical education needs were examined in relation to selected demographic variables. These variables were age, prior employment, and type of education.

The portion of the research involved in studying the relationships of self-assessed professional education needs of certain vocational teachers and those needs expressed by HOE teachers will be discussed first.

The following hypothesis was subjected to statistical analysis to observe any relationship between professional educational needs of HOE teachers and those teachers in other vocational program areas.

> HOE teachers in secondary schools do not express any professional education needs different from the professional education needs expressed by other secondary school vocational education teachers.

The null hypothesis was tested using Friedman's statistic. This tested the relationship of the arrangement of the 110 ranks for the 8 vocational education areas. This analysis also considered the possibility that one vocational education area differed from another area in the arrangement of ranks.

X_F in large samples, as is the case here, is approximately distributed as a Chi-square (X^2 109) variable with n-1 (109 here) degrees of freedom. Significance is obtained (for example, the hypothesis of equivalent ordering of rank is rejected) if X_F exceeded the .05 point of the X^2 109 distribution, which is approximately 134. (The .01 point is 147, .001 point is 165). In the present sample, $X_F = 576.61$ ($p < .001$). Some difference exists between professional education needs between at least some of the occupations.

Considering health occupations education teachers, it is clear from the pattern of correlations that if there is to be a significant difference between health occupations education teachers and other vocational education teachers, then that difference will be with home economic

teachers. Friedman's statistic, X_F, for comparing health occupations education $+X_F$ is 147.61, p = .01. There was no significant difference in the eight types of vocational education teachers in their self-assessed professional education needs, with the exception of home economic teachers. The high correlation coefficient between HOE teachers and vocational education teachers (except home economic teachers) was noted in the Spearman Rank Correlation Coefficient. A correlation of .05 or higher was noted in all areas with the exception noted. Therefore, it was concluded that most vocational education teachers have similar professional education needs. These needs were planning and applying comm. surveys, collect and interpret employer needs, obtain appropriate student instructional material, P.R., evaluation, group presentations, advisory groups, and TV and radio presentations.

The top professional education needs identified by the teachers were in the area of public relations, conducting a community survey from planning to analyzing, self-evaluation of instructional effectiveness, and budget and long range plan preparation. (See Table 1.3). HOE teachers were the focus of the next portion of research. Their self-assessed technical education needs were studied for possible relationships to teacher's age, education, and prior employment. Hypotheses two through four were tested for these relationships.

The Wilcoxon signed rank test was used to test for a difference in median responses for each question. This is the nonparametric analogue to the T-test and was appropriate for this data set. P-values are reported for comparisons between paired responses on each age group, level of education, and type of previous employment. Sample size did not warrant consideration of possible interrelationships between age, education, or prior employment held by HOE teachers.

Hypothesis 2: There is no significant relationship between age of the HOE teacher and technical education needs expressed.

There is no significant relationship between age of the health occupations education teacher and technical education needs expressed, was not rejected. However, there were some significant areas that suggested age may have some relationship to self-assessed needs. The relationship was not significant since only thirty questions out of 97 had a P-value within the significant range, and of those thirty only five different questions were significant at the α .05 level.

The significant questions were related to the scheduling of personnel and the other two questions dealt with the transporting of patients.

In addition to the questions previously mentioned, with responses in the significant range, items included bookkeeping, medical asepsis, sterilization procedures and preparing patients for surgery.

Hypothesis 3: There is not significant relationship between the educational level of the HOE teacher and technical educational needs expressed.

There was no significant relationship between educational level of the health occupations education teacher and technical education needs

Table 1.1

Spearman Correlation Coefficients* For Eight Vocational Education Program Areas

	AG	MD	IA	BO	PV	HE	TI	HO
AG	1	.689	.591	.767	.741	.376	.809	.686
MD		1	.575	.773	.589	.406	.658	.768
IA			1	.557	.658	.230	.620	.591
BO				1	.774	.374	.773	.800
PV					1	.310	.792	.667
HE						1	.510	.335
TI							1	.731
HO								1

* Using midranks for ties.

Table 1.2

Top Ten Professional Education Needs Expressed by Teachers in All Vocational Education Program Areas

Priority (All Areas)		Question
1.	1.	Plan community survey to identify local employer demands and student occupational interest.
2.	2.	Collect and interpret employer demands and student occupational interest information.
3.	3.	Apply the findings of a community survey to your vocational program.
4.	17.	Obtain appropriate student instructional materials.
5.	77.	Develop a plan to improve and maintain school-community relations.
6.	7.	Develop long range plans for your vocational program.
7.	13.	Determine and analyze the instructional needs of students.
8.	10.	Evaluate your vocational program.
9.	78.	Make presentations to schools and community groups to promote your program.
9.	6.	Use an advisory committee to set vocational program goals and objectives.
9.	82.	Plan and present T.V. and radio programs to promote your program.

Table 1.3

Top Ten Technical Education Needs Expressed By Health Occupations Education Teachers

Priority	X	Question	
1.	2.94	21.	Analyze the results of non-standardized tests that measure goals, commitment, values, and interests as they relate to a student's potential for a health career.
2.	2.70	20.	Demonstrate the guidance/counseling process as related to student assessment for health career decisionmaking.
3.	2.59	37.	Describe the diagnostic process as it incorporates the five elements of problem-solving/decision-making.
4.	2.59	18.	Project employment opportunities in the state of North Carolina for health team members of selected health services.
5.	2.59	22.	Apply the guidance/counseling process to include assisting the student in seeking health career information based on their existing needs.
6.	2.49	14.	Explain how a national health care plan may affect the demand for health team members in a health care delivery system.
7.	2.49	32.	Apply the metric system in respect to linear measurements and computation of liquids and solids.
8.	2.49	57.	Apply at least nine appropriate clerical skills as they relate to the effective and efficient management of a health agency.
9.	2.46	25.	Explain at least four laws governing the delivery of health care/maintenance services by identified health team members.
10.	2.45	36.	Apply the procedure for handling/measuring liquids/solids (i.e., specimens, smears, cultures) using the metric system and identification labels.

Table 1.4

Sample Sizes of Health Occupations Education Teachers
By Variables of Age, Prior Employment and Education

Variable		Number
Age	A -- 22 years - 31 years	13
	B -- 32 years - 41 years	22
	C -- 42 years +	17
Education	E -- Diploma	31
	F -- BS, BA, or Assoc. Degree	21
Prior Employment	I -- Hospital nursing	26
	K -- Nonpracticing - (nursing administration or nursing ed.)	16
	M -- Community nursing - (public health, military or industrial)	10
Total Sample N = 67		
Non-respondents = 15		

expressed. Therefore, it was concluded that for secondary school HOE teachers, the type of registered nurse education does not make a significant difference in needs expressed. (Sample population had 60% diploma nurses and 40% degree nurses, associate degree or higher).

Hypothesis 4: There is not significant relationship between the type of prior employment held by HOE teachers and the type of technical education needs expressed.

There were only two questions of statistical significance relating to prior employment held by health occupations education teacher. These were questions which dealt with national health care delivery plan and using test score results to measure student potential in the health care system. There were seven questions that showed some relationship, that is, the P-value was significant but 97 items on the survey with this was not enough to denote a strong relationship.

Since the variables had no significant effect on the items selected on the technical education needs questionnaire, a mean response was computed for the total group of teachers under study. The results revealed nine questions with a mean of 2.5 or higher on the scale of one (no need) to five (very high need). These questions represented mostly concepts and theories as opposed to skills. Two of the nine questions, one on metric system conversion and one on clerical skills, were skill oriented. The remaining seven questions were as follows: three on counseling and guidance for health careers; one on health law, one on national health care; one on health employment in North Carolina; and one on problem solving and decision-making. The questions that were related to patient environment had the lowest mean.

Implications and Recommendations

Based on the findings of this study, the following recommendations are made:

1. Since there was no significant difference in the professional education needs of HOE teachers, and the other vocational education teachers, except home economic education teachers, inservice activities could be conducted with groups of other vocation education teachers. An analysis of the means of the 110 items on the professional education instrument should be done to ascertain which areas are felt to be needed by the majority of teachers. This joint planning would appear to meet the professional education needs of vocational education teachers and would avoid costly duplication of staff development activities in each vocational area. Further study of home economics teachers could be done to determine why their professional educational needs do not correlate with the top ten professional educational needs expressed by teachers in other vocational areas.

2. For teachers returning to school for more teacher education courses, it would appear from this research that core courses such as curriculum development would serve the needs of many. Common core courses would make it unnecessary for each area to teach separate courses. However, new concepts and emerging technology in the health discipline will continue to represent needs of HOE teachers.

3. Commonalities of professional education needs of vocational teachers (except home economic teachers) should be identified. Staff development programs could then be designed for all vocational program areas, except home economics education, using the competency based format. The modules or learning package should be based on the topic indicated as needed by all vocational teaches, with learning activities and examples representing each program area.

4. Since there was no significant difference in technical needs expressed by diploma or degree prepared, HOE teacher, staff development needs in this area are the same. Therefore, all HOE teachers should participate in the same staff development activities.

5. Staff development activities for the HOE should focus on the following technical education needs:

   a. state of the arts of the national health care system;
   b. using student information and career information in guidance toward health careers;
   c. problem solving and decision-making;
   d. health law;
   e. metric system computations

Some staff development needs may be met through learnring modules in the competency based format. The metric system material would particularly fit this mode of instruction.

Recommendations for Further Research

The following questions arose during this study and are suggested topics for further research:

1. Would length of employment as a HOE teacher have a relationship to professional education or technical education needs expressed?

2. Would post secondary health HOE teachers, who are registered nurses, express similar staff development needs as secondary HOE teachers?

3. Would post secondary HOE teachers, who are not registered nurses, express the similar staff development needs?

4. Why are home economics teachers different in their expressed professional education needs from HOE teachers?

5. Would non-vocational teachers be homogeneous with vocational teachers in self-assessed professional education needs?

APPENDICES

FORM A

STAFF DEVELOPMENT
PROFESSIONAL NEEDS ASSESSMENT
for Vocational Teachers

TEACHER FORM

INTRODUCTION

This questionnaire, which contains a comprehensive list of professional teaching competencies, is provided for you to identify your specific program-related needs as they relate to your present teaching responsibilities. *Your individual responses will be kept in strict confidence and will be reported back only to you.*

MARKING DIRECTIONS

- Use only a black lead pencil (No. 2½ or less)
- Make heavy black marks that fill the circles
- Erase cleanly any answers you wish to change
- Make no stray marks on this sheet

Sample | Correct | Incorrect

Code | School | Teacher | Supervisor | Level: Secondary, Post Secondary, Both | Sex: Male, Female | Program Code (REFER TO PROGRAM CODE SHEET)

DIRECTIONS: *Please read directions carefully*

1. Read each item and indicate to the left of the item whether it is a competency that is or is not relevant to your present position. Blacken ⊙ for Yes or blacken ⊖ for No.
2. If you indicated "No" to an item, do not rate your need to improve for that item. Continue to the next statement.
3. Only if you indicated "Yes" to an item should you then rate your need to improve for that item. A rating of ⊙ indicates no improvement is needed and ⊙ indicates a very high need to improve.

Note: This is not an evaluation of your teaching performance, but rather a self assessment intended to identify areas in which you think there is room for improvement. Please respond as accurately as you can.

RELEVANCE Yes	RELEVANCE No	PERFORMANCE STATEMENTS	NEED TO IMPROVE None	Low	Medium	High	Very High
		EXAMPLES:					
⊙	⊖	A. Use the blackboard.	⊙	⊙	⊙	⊙	⊙
⊖	⊙	B. Return tests promptly.	⊙	⊙	⊙	⊙	⊙
		I. PROGRAM PLANNING, DEVELOPMENT AND EVALUATION					
⊙	⊖	1. Plan a community survey to identify local employer demands and student occupational interests.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	2. Collect and interpret employer demand and student occupational interest information.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	3. Apply the findings of a community survey to your vocational program.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	4. Organize or reorganize an occupational advisory committee.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	5. Maintain an occupational advisory committee.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	6. Use an advisory committee to set vocational program goals and objectives.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	7. Develop long-range plans for your vocational program.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	8. Conduct an occupational analysis to identify entry level occupational competencies for your vocational program.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	9. Conduct a continuous student follow up study of former students.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	10. Evaluate your vocational program.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	II. INSTRUCTIONAL PLANNING					
⊙	⊖	11. Develop a philosophy for your vocational program.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	12. Develop a course of study.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	13. Determine and analyze the instructional needs of students.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	14. Write student performance objectives.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	15. Plan and write a unit of instruction.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	16. Write a lesson plan.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	17. Obtain appropriate student instructional materials.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	18. Design and prepare teacher made instructional materials.	⊙	⊙	⊙	⊙	⊙
		III. INSTRUCTIONAL TECHNIQUES					
⊙	⊖	19. Organize and introduce a lesson.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	20. Summarize a lesson for students.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	21. Demonstrate a manipulative skill.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	22. Give a lecture.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	23. Direct individual and/or group field trips.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	24. Conduct group discussions, panel discussions and symposiums.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	25. Stimulate learning through brainstorming and buzz groups.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	26. Facilitate student learning through role playing techniques.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	27. Organize and direct student laboratory experiences.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	28. Direct students in applying problem solving techniques.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	29. Direct students in acquiring skills, attitudes, or concepts using the project method.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	30. Employ oral questioning techniques in a planned lesson to guide student's thinking.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	31. Conduct a lesson using reinforcement techniques.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	32. Design a lesson which considers individual differences of students.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	33. Present information using illustrations from your occupational specialty.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	34. Demonstrate a concept or principle from your occupational specialty.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	35. Plan, present and evaluate a lesson as a team teaching member.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	36. Present information using a subject matter expert.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	37. Develop bulletin boards and exhibits.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	38. Present a lesson using models, flannel boards or real objects.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	39. Present information using overhead or opaque projectors.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	40. Present information using films, filmstrips and slides.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	41. Present information with televised and videotaped materials.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	42. Present information using records and tapes.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	43. Present information with chalkboard and flip chart.	⊙	⊙	⊙	⊙	⊙
		IV. PERSONALIZED INSTRUCTION					
⊙	⊖	44. Organize and direct students to help instruct other students.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	45. Direct independent and group study of students.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	46. Direct individualized or personalized instruction.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	47. Adjust instructional activities or methods to meet the needs and abilities of students.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	48. Use instructional contracts for individualized or personalized instruction.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	49. Direct programmed instruction.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	50. Review instructional activities and materials to identify and eliminate bias in terms of sex, race, religion, etc.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	51. Identify students who need special assistance to succeed in your vocational program.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	52. Refer handicapped and disadvantaged students for diagnosis and/or special services.	⊙	⊙	⊙	⊙	⊙
⊙	⊖	53. Identify chemical dependent students (e.g., excessive alcohol and drug users).	⊙	⊙	⊙	⊙	⊙
⊙	⊖	54. Refer chemical dependent students to appropriate agencies or services for professional assistance.	⊙	⊙	⊙	⊙	⊙

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PERFORMANCE STATEMENTS	NEED TO IMPROVE					
	None	Low	Medium	High	Very High	
V. INSTRUCTIONAL EVALUATION						
55. Establish standards for student performance.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
53. Develop a paper and pencil test to assess student knowledge of the subject.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
57. Develop a test or similar device to assess student attitudes toward the subject area.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
53. Develop a test or system to assess the technical skill level of students	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
59. Determine student grades or performance levels in the program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
60. Evaluate your own instructional effectiveness	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
VI. INSTRUCTIONAL MANAGEMENT						
61. Identify and plan future instructional resource needs	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
62. Prepare financial budgets and reports for your program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
63. Purchase or arrange for purchasing supplies and equipment.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
64. Maintain a filing system.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
65. Develop a safety program based on local, state, and federal safety regulations.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
66. Explain accident and safety procedures	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
67. Develop a system for administering preventive and corrective classroom discipline.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
68. Organize a vocational laboratory	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
69. Manage and maintain a vocational laboratory	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
VII. GUIDANCE						
70. Clarify your own personal and social values	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
71. Accept students with different or unique personal social values.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
72. Identify and interpret student personal or cumulative information.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
73. Gather student data through personal contacts	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
74. Assist students to identify personal, educational, and career needs through teacher-student conferences.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
75. Provide information on educational and career opportunities.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
76. Teach job and education seeking skills.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
VIII. SCHOOL COMMUNITY RELATIONS						
77. Develop a plan to improve and maintain school community relations.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
78. Make presentations to school and community groups to promote your program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
79. Design and provide brochures to inform the school and community about your program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
80. Design and provide displays in the school and community on your program	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
81. Prepare news releases and articles to promote your program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
82. Plan and present television and radio programs to promote your program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
83. Plan and conduct an open house for your program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
84. Provide services to members of the community (e.g., adult evening classes).	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
85. Cooperate with state and local educators.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
86. Obtain feedback from the school and community concerning your program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
IX. STUDENT VOCATIONAL ORGANIZATIONS						
87. Develop a personal philosophy toward student vocational organizations	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
88. Establish a student vocational organization.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
89. Assist students in preparing for leadership roles in student vocational organizations.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
90. Assist students in developing and financing a yearly program of activities for their vocational organization	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
91. Supervise activities of student vocational organizations.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
92. Provide learning experiences for students through vocational organization competitive events.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖

RELEVANCE		PERFORMANCE STATEMENTS	NEED TO IMPROVE					
Yes	No		None	Low	Medium	High	Very High	
		X. PROFESSIONAL ROLE AND DEVELOPMENT						
⊖	⊖	93. Keep up to date in your profession and occupational specialty	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	94. Develop and maintain active involvement in professional teaching organizations.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	95. Develop and maintain a professional philosophy of education/ teaching.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	96. Develop and maintain active involvement in school and community affairs.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	97. Obtain and maintain a teaching position in keeping with your professional qualifications	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	98. Plan and provide laboratory experiences for student teachers	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	99. Plan the student teaching experience.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	100. Supervise student teachers.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
		XI. COORDINATION						
⊖	⊖	101. Establish standards and procedures for operating a cooperative vocational education program.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	102. Establish and apply policies for managing student attendance, transfers and terminations.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	103. Recruit and enroll prospective students.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	104. Identify and secure prospective training stations for co-op students.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	105. Place co-op students in appropriate training stations	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	106. Develop the training ability of on-the-job supervisors.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	107. Coordinate and supervise on-the-job instruction.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	108. Evaluate on-the-job student performance.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	109. Plan and conduct related instruction.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖
⊖	⊖	110. Plan and conduct an employer-employee appreciation event or banquet.	⊖	⊖	⊖	⊖	⊖	⊖ ⊖

USEFULNESS OF QUESTIONNAIRE

1. In terms of your professional development, do you think this questionnaire represents an accurate assessment of your strengths and concerns?

   ○Yes ○No

2. Would a tabulation of your needs from this questionnaire help you better plan your professional development?

   ○Yes ○No

3. Would a tabulation of your needs as perceived by your students help you better plan your professional development?

   ○Yes ○No

4. Would a tabulation of your needs as perceived by your immediate supervisor help you better plan your professional development?

   ○Yes ○No

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Appendix B

Technical Needs Survey Instrument

Need for Teacher In Service				
(1) None	(2) Low	(3) Med.	(4) High	(5) Very High

1. Analyze the meaning of health/wellness using the World Health Organization's definition.
2. Assess your own personal health habits/values as they relate to the World Health Organization's (WHO) definition.
3. Assess the local community health/wellness based upon the WHO definition as a criteria.
4. Describe at least three aspects of health maintenance/care within a given community using the following criteria:
   (1) Type of agency.
   (2) Organizational structure.
   (3) Services rendered.
5. Analyze the documented behavioral changes as influenced by a health care/maintenance environment.
6. Analyze the health care delivery system using the following criteria: (1) historical development, (2) influences on the system, (3) types of health care maintenance environments, and (4) impact of national trends on health care industry.
7. Describe at least three social attitudes/patterns of health care/maintenance that evolved between the 17th and 19th centuries.
8. Describe at least three major periods in the development of American health care/maintenance including the major changes that occurred in each.
9. Explain at least five kinds of inpatient/residential health agencies including the type of services provided.
10. Compare at least five resources of ambulatory care by relating the type of service afforded.
11. Differentiate the role of public health at the federal, state, and local levels.
12. Describe how the educational system influences the health care delivery system.
13. Explain how the economic level of a country affects the health care delivery system.
14. Explain how a national health care plan may affect the demand for health team members in a health care delivery system.
15. Analyze at least fifty health occupations.
16. Explain the health career ladder concept.
17. Analyze at least fifty health occupations representing a variety of health career ladders according to the following criteria: (1) primary role(s) of health team member, (2) educational preparation, (3) available preparational programs in North Carolina, (4) employment placement(s), (5) physical requirement(s), (6) intellectual requirements, and (7) credentialing requirement(s) for practice.
18. Project employment opportunities in the state of North Carolina for health team members of selected health services.
19. Predict at least five categories of health team members to be needed.
20. Demonstrate the guidance/counseling process as related to student assessment for health career decisionmaking.
21. Analyze the results of non-standardized tests that measure goals, commitment, values, and interests as they relate to a student's potential for a health career.
22. Apply the guidance/counseling process to include assisting the student in seeking health career information based on their existing needs.

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Need for Teacher In Service				
(1) None	(2) Low	(3) Med.	(4) High	(5) Very High

23. Analyse the ethical/legal components of an identified health team member's role and responsibility in the delivery of health care/maintenance services.

24. Describe at least four ethical codes in respect to health care/maintenance.

25. Explain at least four laws governing the delivery of health care/maintenance services by identified health team members.

26. Relate the importance of confidentiality to ethical/legal roles/responsibilities of health team members.

27. Interpret the legal and ethical implications of "The Patient's Bill of Rights."

28. Describe the ethical codes/legal responsibilities as they relate to the health team member's role/responsibility to both patients/clients and to other health team members.

29. Apply medical terminology as it relates to structure, meaning, and correct usage.

30. Synthesize the meanings of at least 50 medical terms through the identification of structural parts.

31. Assess the medical terminology as it applies to correct or incorrect usage.

32. Apply the metric system in respect to linear measurements and computation of liquids and solids.

33. Convert a list of at least 10 different measurements related to patients' physical assessments using the English system by applying the metric system.

34. Compute at least 10 problems relating to the measurement of liquids and solids by applying the metric system.

35. Evaluate the metric system in lieu of the English system of measurement.

36. Apply the procedure for handling/measuring liquids/solids (i.e., specimens, smears, cultures) using the metric system and identification labels.

37. Describe the diagnostic process as it incorporates the five elements of problem-solving/decision-making.

38. Describe the diagnostic process utilized in the delivery of health care services.

39. Interpret data collected the diagnostic process as they relate to normal and abnormal values.

40. Describe at least five different kinds of data acquired in the diagnostic process.

41. Explain the data components of a hypothetical patient case history as each relate to defined normal/abnormal research values.

42. Compare the relationship of pathogenic organisms in the human body to their respective causative disease(s)/disorder(s).

43. Contrast active and passive immunity.

44. Discuss at least thirty terms related to pathogenic organisms and their application to the disease/disorder process.

45. Analyse the body systems according to their normal structure and function and their response to major diseases and disorders to include the skeletal, muscular, respiratory, lymphatic, nervous, urinary, endocrine, and reproductive systems.

46. Describe the interdependance of the individual body systems (functions and structures) while maintaining physical/chemical homeostasis.

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Need for Teacher In Service				
(1) None	(2) Low	(3) Med.	(4) High	(5) Very High

47. Classify at least ten diseases/disorders according to definition, etiology, affect on body systems, diagnostic testsss, treatment, care, rehabilitation, and prognosis.

48. Analyse the appropriate body systems (skeletal, muscular, respiratory, circulatory, lymphatic, nervous, urinary, endocrine, and reproductive) as affected by alcohol, addictive drugs, tobacco, and environmental pollutants.

49. Describe at least five emotional/physical affects of alcohol on the body systems.

50. Compare the potential effects of abuse with the normal prescribed usage of at least five addictive drugs.

51. Relate at least three degrees of smoking tobacco (light, moderate, heavy) to the affects on body structure and function.

52. Explain the detrimental effects on humans given at least one example each of noise, water, air, and chemical pollution including the body systems affected, means of diagnosing, treatment, care, rehabilitation, prognosis, and means of elimination.

53. Apply affective communication processes in the delivery of health care/maintenance including the following components: observation skills, listening skills, verbal skills, and nonverbal skills.

54. Explain the role of observation as a part of a health team member's method of communication.

55. Demonstrate the communication skill of "active" listening.

56. Apply effective communication skills including the following: observation, listening, verbal, and nonverbal behaviors.

57. Apply at least nine appropriate clerical skills as they relate to the affective and efficient management of a health agency.

58. Apply the procedure for maintaining files/records in a given health agency to including both alphabetical and ?????.

59. Apply the procedure for scheduling medical appointments in a given health agency.

60. Apply the procedure for maintaining an inventory that includes, but is not limited to, supplies and equipment.

61. Apply the procedure for maintaining a bookkeeping system in a given health agency to include, but is not limited to, debits, credits, bill paying, bank deposits, and tax assessments.

62. Apply the procedure for accurately transcribing a physician's orders for an identified hospitalized patient.

63. Apply the procedure for organizing health team members' assignment schedules for an identified health agency (i.e., Radiology - organizing requisitions for Gastro-Intestinal Series - upper and lower).

64. Apply the procedure for admitting a patient/client to an identified health agency.

65. Apply at least five patient/client assessment measures in the diagnostic process.

66. Apply the procedure for measuring/recording a patient/client's vital signs.

67. Apply the procedure for observing/recording the weight of a patient/client using both the metric and English systems.

68. Apply the procedure for measuring/recording visual acuity using a given visual chart, i.e., Snellen Chart.

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Need for Teacher In Service (1) None	(2) Low	(3) Med.	(4) High	(5) Very High	
					69. Apply the procedure for observing/recording a patient/client's external physical characteristics to include, but not limited to, nose, eyes, hair, and skin.
					70. Apply medical asepsis as related to individual, patient/client, and environmental protection.
					71. Apply the procedure for medical aseptic handwashing.
					72. Apply the appropriate procedure for disinfection.
					73. Apply the procedure for handling that prevents contamination.
					74. Apply the procedure for disinfection of skin sites.
					75. Apply the appropriate isolation procedure that prevents cross-contamination of contagious diseases/disorders.
					76. Apply surgical asepsis as related to individual, patient/client, environmental protection.
					77. Apply the procedure for surgically aseptic handwashing.
					78. Apply the procedure for surgically donning clothing appropriate to a sterile environment; i.e., gown, gloves, mask, etc.
					79. Apply the procedure for sterilization.
					80. Apply the procedure for surgically preparing patient/client operative sites.
					81. Apply accepted safety practices in at least four procedures that transport patients/clients.
					82. Apply the procedure for transporting a patient/client from the bed/table to a wheelchair and from the wheelchair to the bed/table using safety practices that protect the persons involved.
					83. Apply the procedure for transporting a patient/client from the bed/table to a stretcher and from the stretcher to the bed/table using the safety practices that protect the persons involved.
					84. Apply the procedure for transporting a patient/client from the bed/wheelchair/stretcher to a hydraulic lift and from the hydraulic lift to the bed/wheelchair/stretcher using safety practices that protect the persons involved.
					85. Apply the procedure for ambulating a patient/client with and without devices using safety practices that protect the persons involved.
					86. Maintain an appropriate health care environment as related to comfort, health, and safety of the inhabitants.
					87. Apply the procedure for adjusting the environmental temperature to the comfort, health, and safety of the inhabitants.
					88. Apply the procedure for maintaining a clean health care environment.
					89. Apply the procedure for maintaining a safe/accident-free health care environment.
					90. Apply the procedure for control of unnecessary noise within a health care environment.
					91. Apply at least six patient care skills as related to aligning/positioning, hot/cold applications, therapeutic agents, hygiene, exercise, and emergency care.
					92. Position/align a patient/client to include, but not limited to, the following: (1) physical examination, (2) dental examination, (3) x-ray, (4) total patient care, and (5) veterinary care.
					93. Apply the appropriate/legal procedure for a hot/cold application using accepted safety practices that eliminate injury to the patient/client.

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Need for Teacher In Service				
(1) None	(2) Low	(3) Med.	(4) High	(5) Very High

94. Apply the legal procedure for assisting in administering therapeutic agents to include, but not limited to: (1) inhalents, (2) intravenous agents, and (3) gavage.

95. Apply the procedure for hygienic care to a patient/client requiring total care.

96. Assist in applying the legal procedure for active/passive exercise on a patient/client.

97. Apply the appropriate first aid measures.

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FOOTNOTES

1
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6
Appendix for instrument

7
Appendix for instrument